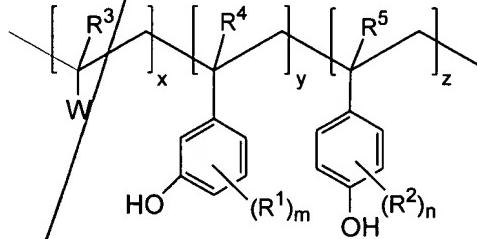


What is claimed:

Suh A1
1. A photoresist composition comprising a photoactive component and a resin that comprises a polymer that comprises 1) an acid-labile group; 2) a meta-hydroxyphenyl group, and 3) a para-hydroxyphenyl group.

2. The photoresist of claim 1 wherein the polymer comprises pendant acrylate acid-labile groups.

3. The photoresist of claim 1 wherein the polymer comprises a structure of Formula I:



I

wherein W comprises an acid-labile group;

R^1 and R^2 are each the same or different non-hydrogen substituents;

R^3 , R^4 and R^5 are each independently hydrogen or optionally substituted alkyl;

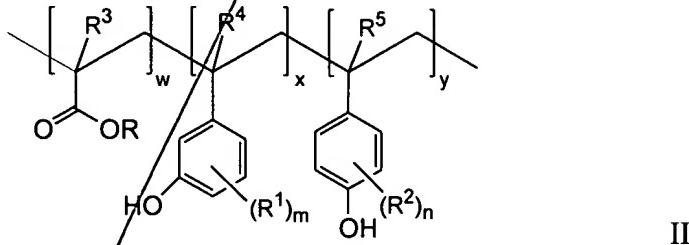
m and n are each independently 0 to 4; and

x , y and z are each greater than 0 and are mole percents of the respective units of the polymer.

4. The photoresist of claim 3 wherein W comprises an acrylate ester.

5. The photoresist of claim 3 wherein the sum of x , y and z is at least about 90 mole percent of total units of the polymer.

6. The photoresist of claim 1 wherein the polymer comprises a structure of the following Formula II:



II

wherein R is optionally substituted alkyl;

R^1 and R^2 are each the same or different non-hydrogen substituents;

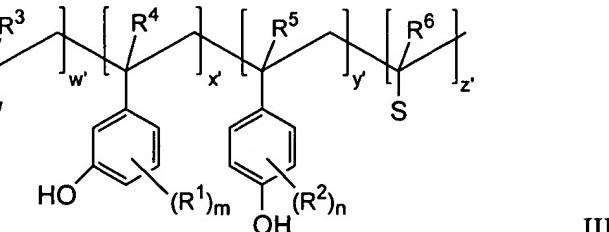
R^3 , R^4 and R^5 are each independently hydrogen or optionally substituted alkyl;

m and n are each independently 0 to 4; and

w, x and y are each greater than 0 and are mole percents of the respective units of the polymer.

7. The photoresist of claim 6 wherein the sum of w, x and y is at least about 90 mole percent of total units of the polymer.

8. The photoresist of claim 1 wherein the polymer comprises a structure represented by the following Formula III:



III

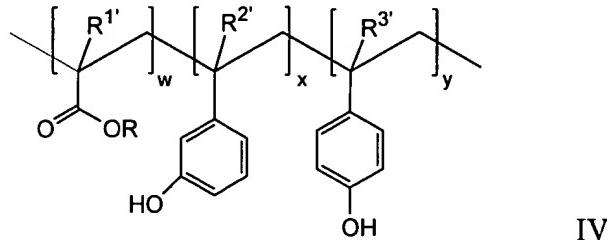
wherein W comprises an acid-labile group;

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R¹ and R² are each the same or different non-hydrogen substituents;
R³, R⁴, R⁵ and R⁶ are each independently hydrogen or optionally substituted alkyl;
m and n are each independently 0 to 4; and
S is a group that does not contain acidic or acid-reactive moieties;
w', x', y' and z' are each greater than 0 and are mole percents of the respective polymer units.

9. A photoresist of claim 8 wherein the sum of w', x', y' and z' is at least about 90 mole percent of total units of the polymer.

10. A photoresist of claim 1 wherein the polymer comprises a structure of the following Formula IV:



wherein R is optionally substituted alkyl;
R^{1'}, R^{2'} and R^{3'} are each independently hydrogen or methyl;
w, x, and y are each greater than 0 and are mole percents of the respective units of the polymer.

11. A photoresist of claim 10 wherein R is tert-butyl group, adamantyl, tetrahydropyranal, or norbornyl.

12. A photoresist of claim 10 wherein the sum of w, x, and y is at least about 90 mole percent of total units of the polymer.

13. A method for forming a photoresist relief image, comprising:
- applying a layer of a photoresist composition of claim 1 on a substrate; and
 - exposing and developing the photoresist layer on the substrate to yield a photoresist relief image.

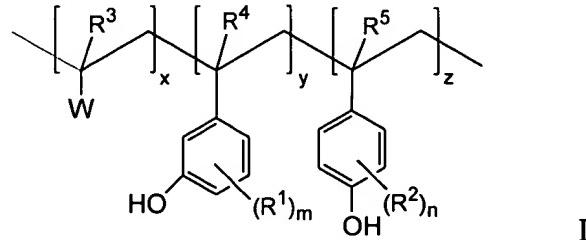
14. The method of claim 13 wherein the substrate is a microelectronic wafer or a flat panel display substrate.

15. An article of manufacture comprising a substrate having coated thereon a photoresist composition of claim 1.

16. An article of claim 15 wherein the substrate is a microelectronic wafer or a flat panel display substrate

17. A polymer that comprises 1) acid-labile groups; 2) meta-hydroxystyrene groups, and 3) para-hydroxyphenyl groups.

18. A polymer of claim 17 wherein the polymer comprises a structure represented by the following Formula I:



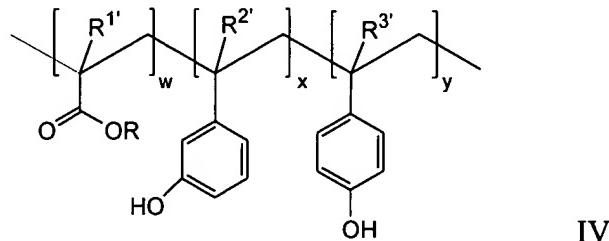
wherein W comprises an acid-labile group;

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R^1 and R^2 are each the same or different non-hydrogen substituents;
 R^3 , R^4 and R^5 are each independently hydrogen or optionally substituted alkyl;
 m and n are each independently 0 to 4; and
 x , y and z are each greater than 0 and are mole percents of the respective polymer units.

19. A polymer of claim 18 wherein W comprises an acrylate ester, and the sum of x, y and z is at least about 90 mole percent of total units of the polymer.

20. A polymer of claim 17 wherein the polymer comprises a structure represented by the following Formula IV:



wherein R is optionally substituted alkyl;
 R^1 , R^2 and R^3 are each independently hydrogen or methyl;
w, x, and y are each greater than 0 and are mole percents of the respective units of the polymer.

Add A⁶